

Notice of Allowability

Application No.

10/796,055

Examiner

Keith Hendricks

Applicant(s)

NISHIUCHI ET AL.

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1761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☐ This communication is responsive to ____.
2. ☒ The allowed claim(s) is/are 1-17.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date ____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>2004</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

The closest prior art is that of EP 1 142 493 (also referred to in the specification as corresponding international publication number WO 00/304474), which discloses a process for preparing a food material from a yeast extract. The yeast extract contains gamma-glutamylcysteine (gamma GC) in an amount of at least 1% by weight, wherein the yeast extract is heated and kept at a temperature of 50-120°C in an acidic or neutral pH for 3 to 300 minutes in the absence of a reducing sugar and in the presence of water (see abstract and paragraph 0034). The heating step converts the gamma GC to cysteine. Paragraph 0038 describes the undesirable effects of the conditions of temperatures either being too high or too low (i.e. outside of the above-mentioned range), and/or the times being too short or too long. Examples 1, 5 and 6 provide specific steps for the described process, where in example 1, "water was added to a yeast extract powder containing 4.5% gamma-glutamylcysteine. The mixture was then adjusted to pH 5 with hydrochloric acid to prepare an aqueous 2% solution, which was heated at 98°C for 180 minutes". Examples 5 and 6 utilize a yeast extract with water to give a 20% aqueous solution, where the concentration of gamma-GC is 0.9%.

The instant claims differ from EP '493 in that they further include a step of "concentrating the extract at a temperature of not greater than 60°C to prepare a food material in a liquid form where the solid concentration is at least 10%", and then "raising the temperature to a temperature ranging from 70 to 130°C" to heat treat the material to convert the gamma GC to cysteine. The prior art does not teach these separate steps, and does not provide a teaching of the advantages of using a concentration step at a temperature of not greater than 60°C, prior to the heating step well above this concentration temperature. Reference is made to pages 7-9 of applicant's specification, which provides a further explanation as to these differences, as well as the unexpected advantageous result of the use of the concentration step. Specifically, the paragraphs at mid-page 7 of the specification state that in example 1 of EP '493 (WO 00/304474), "the conversion rate from gamma-GC to cysteine was about 40%." However in the method according to the instant claims, as stated at page 7, the inventors "have found that the conversion rate from gamma-GC to cysteine could be raised to as high as 70% when the yeast extract containing gamma-GC is concentrated while maintaining the temperature at not greater than 60°C to provide a concentrate having at least 10% of solid and subsequently subjecting the extract to heat treatment at 70 to 130°C." Such results were neither taught nor suggested by the prior art, specifically EP '493. Further, one of

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ordinary skill in the art would not have been motivated to depart from the disclosed hydrated yeast extract powder of EP '493, to utilize an extraction step and then a concentration step starting from yeast cells.

Finally, regarding another patent reference of record, EP 1 283 015, while this reference employs techniques generally similar to EP '493, it utilizes a starting yeast material with a glutathione content of at least 1%. This reference does not teach or involve the production of cysteine from gamma-GC. In fact, reference is made to the paragraph at the top of page 9 of the instant specification, which states that "gamma-GC interacts with a compound having an SH group in the yeast extract during the decomposition reaction whereupon the productivity of cysteine lowers and, therefore, it is preferred to use a yeast where the glutathione content in the cells is low, preferably not more than 0.5% in dried yeast cells or, more preferably, not more than 0.1." Thus one of ordinary skill in the art using the yeast extract starting materials of EP '015 would not be expected to arrive at the instantly-claimed invention.


Thus the instant claims are free of the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (571) 272-1401. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KEITH HENDRICKS
PRIMARY EXAMINER